

I/we claim:

1. A method for detecting a deantigenized T cell epitope, said method comprising:
  - (a) providing an amino acid sequence of a T cell epitope, said T cell epitope having a binding affinity to a soluble MHC molecule;
  - (b) providing one or more altered T cell epitopes, wherein the amino acid sequence of said altered T cell epitope is different from the amino acid sequence of said T cell epitope;
  - (c) contacting said altered T cell epitope with said soluble MHC molecule for sufficient time to permit MHC-epitope binding complexes to form; and
  - (d) detecting one or more altered T cell epitopes, wherein said detected altered T cell epitope identifies a deantigenized T cell epitope having a binding affinity to said soluble MHC molecule less than the binding affinity of said T cell epitope to said soluble MHC molecule.
2. The method of claim 1 further comprising the steps of:
  - (e) providing one or more altered T cell epitopes, wherein the amino acid sequence of said one or more altered T cell epitopes is different from the amino acid sequence of a deantigenized T cell epitope obtained in step (d); and
  - (f) repeating steps (c) and (d).
3. The method of claim 1, wherein said deantigenized T cell epitope possesses a dissociation constant with said soluble MHC molecule greater than or equal to about  $5 \times 10^{-7}$  M.
4. The method of claim 1, wherein said deantigenized T cell epitope possesses a dissociation constant with said soluble MHC molecule greater than or equal to about  $5 \times 10^{-5}$  M.
5. The method of claim 1, wherein said deantigenized T cell epitope possesses a dissociation constant with said soluble MHC molecule greater than or equal to about  $5 \times 10^{-3}$  M.
6. A method for generating a modified polypeptide, wherein said modified polypeptide exhibits reduced immunogenicity compared to that of an immunogenic polypeptide, wherein the amino acid sequence of said immunogenic polypeptide comprises at least one T cell epitope amino acid sequence, said method comprising:
  - (a) detecting a deantigenized T cell epitope according to any one of the methods of claim 1;
  - and

- (b) generating a polypeptide having an amino acid sequence modified from said immunogenic polypeptide, such that said deantigenized T cell epitope amino acid sequence detected from step (a) is substituted for said T cell epitope amino acid sequence of said immunogenic polypeptide.
7. The method of claim 6, wherein said modified polypeptide exhibits a biological function similar to that exhibited by said immunogenic polypeptide.
  8. A deantigenized T cell epitope detected by any one of the methods of claim 1.
  9. A polynucleotide encoding a deantigenized T cell epitope according to claim 8.
  10. An expression vector containing a polynucleotide according to claim 9.
  11. A host cell transformed with a vector according to claim 10.
  12. A modified polypeptide, wherein said modified polypeptide exhibits reduced immunogenicity compared to that of an immunogenic polypeptide, said modified polypeptide generated by any one of the methods of claim 1.
  13. The modified polypeptide according to claim 12, wherein said modified polypeptide is selected from the group of modified polypeptides that: exhibit enzymatic activity; act as an adjuvant; function as a carrier for other molecules; and are capable of binding to a molecule within or administered to an animal to alter the bioactivity, biodistribution and/or bioavailability of the bound molecule.
  14. The modified polypeptide according to claim 12, wherein said modified polypeptide is a modified immunoglobulin.
  15. The modified polypeptide according to claim 12, wherein said modified polypeptide is a modified monoclonal antibody.
  16. A pharmaceutical composition comprising a modified polypeptide according to any one of the modified polypeptides of claim 12 and pharmaceutically acceptable carrier.

17. Use of a modified polypeptide according to any one of the modified polypeptides of claim 12 to prevent, to treat, or to diagnose a disease or disorder in a vertebrate.
18. A polynucleotide encoding a modified polypeptide according to any of claim 12.
19. An expression vector containing a polynucleotide according to claim 18.
20. A host cell transformed with a vector according to claim 19.

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